Pietra

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF PENNSYLVANIA

- - -

ARTHUR G. GIRTON, Executor of the Estate of John R. Gunsalus, Plaintiff	:	CIVIL ACTION NO. 85-7180
v.	:	Philadelphia, Pennsylvania
	:	June 9, 1988
THE AMERICAN TOBACCO CO., Defendant	:	9:50 a.m.

JURY TRIAL - VOLUME THREE
BEFORE THE HONORABLE NORMA L. SHAPIRO, J.
UNITED STATES DISTRICT JUDGE

- - -

APPEARANCES:

For the Plaintiff: THOMAS F. JOHNSON, ESQUIRE
DANIEL CHILDS, ESQUIRE
BENJAMIN P. SHEIN, ESQUIRE
235 South 17th Street
Philadelphia, PA 19103

For the Defendant: THOMAS BEZANSON, ESQUIRE
BRUCE SHEFFLER, ESQUIRE
30 Rockefeller Plaza
New York, NY 10112

EDWARD F. MANNINO, ESQUIRE
ANN CALDWELL, ESQUIRE
1800 Three Mellon Bank Center
Philadelphia, PA 19102

- - -

Audio Operator: Burnel T. Gilliams

Transcribed by: Laws Transcription Service

(Proceedings recorded by Electronic Sound Recording; transcript provided by transcription service.)

- - -

Laws Transcription Service
110 Lexington Avenue
East Lansdowne, PA 19050
(215) 623-4178

(The following occurred in open court at 9:50 a.m.)

THE COURT: Who is the witness, we have Dr. Pietra?

MR. MANNINO: Yes, your Honor.

THE COURT: All right. Is there anything before trial?

MR. MANNINO: Your Honor, I'd just like to give you a copy of Dr. Ginzel's materials so that you'll have them when we're --

THE COURT: You also said yesterday that you had some sort of motion, but you didn't hand it up.

MR. MANNINO: That's been taken care of. The plaintiffs are not going to raise the issue of DDVP. Your Honor has previously ruled on...

THE COURT: What's DDVP, if I may ask?

MR. MANNINO: Pesticides, your Honor.

THE COURT: Oh, I thought the motion was about the experiment.

MR. MANNINO: I thought your Honor had ruled on that yesterday.

THE COURT: Well I just didn't want to keep you from handing up something that you had.

MR. MANNINO: No, your Honor.

THE COURT: All right. I'll put the ruling on the record actually when we finish with Dr. Pietra. I won't take the time to do it now.

MR. JOHNSON: Before Dr. Ginzel takes the stand I'd like a few minutes with supporting counsel.

THE COURT: Yes, all right.

Will you bring in the jury and would Dr. Pietra take the stand, please.

(Jury in at 9:52 a.m.)

THE COURT: Good morning, please be seated.

Good morning, members of the jury. You recall yesterday that we had heard Dr. Pietra's qualifications and we were having some discussion about the nature of them in regard to his testimony. I have ruled that he is qualified to give the testimony that you will hear and the weight of it will be for you after you hear all the evidence in the case, just the same as any other witness.

You remain under oath, Dr. Pietra.

You may proceed, Mr. Johnson.

DR. GIUSEPPE PIETRA, Plaintiff's witness, previously sworn, resumed.

CONTINUED DIRECT EXAMINATION

BY MR. JOHNSON:

Q Dr. Pietra, just to get us back on track from last night, you are a pathologist at the University of Pennsylvania?

A Yes, I am.

Q And you do consults for other doctors in the City of

Philadelphia?
A Yes, I do.
Q Or other doctors in the United States?
A Yes.
THE COURT: Mr. Johnson, I am sure the jury can remember Dr. Pietra's qualifications from yesterday. Please don't be repetitive.
MR. JOHNSON: Fine.
BY MR. JOHNSON:
Q Doctor, did you review slides of lung tissue from my client, John Gunsalus?
A Yes, I review a slide, I remove at autopsy from the lung tissue and the kidneys.
Q And, Doctor, did you reach a conclusion, did you reach an opinion to a reasonable degree of medical certainty as to the primary site of Mr. Gunsalus' cancer?
A Yes, I reached a conclusion with a high degree of medical certainty that Mr. Gunsalus had a tumor which arose in the lung, metastasized to his liver.
Q And, Doctor, how would you classify that lung tumor according to the manner in which pathologists classify tumors?
A Tumor is a small cell carcinoma of the lung.
Q Doctor, have you prepared a chart for the benefit of the jury on the kind of lung cancers that exist?

A Yes, I prepare a slide to explain the different types of carcinoma that may arise from the lung.

MR. JOHNSON: Your Honor, may we put that on the overhead projector and have the doctor use the microphone over here to explain it?

THE COURT: Which microphone?

MR. JOHNSON: The one that is on the table.

THE COURT: Yes. I think he can take it in his hand and get back by the slide. Yes, the answer is you may.

MR. JOHNSON: Would you step down, Doctor, and go over by the screen?

Yes, then why don't you use that microphone right there.

THE WITNESS: Most lung tumor arises from the lining of the airways in carcinomas. Within these bodies, three major group, according to their clinical behavior. One group --

THE COURT: I'm sorry.

MR. JOHNSON: Could you pick up the microphone.

THE COURT: That's right. Use it as if you're lecturing somewhere.

THE WITNESS: They can be divided in three groups, based on their clinical behavior. One group is called low grade malignancy. These are tumors that remain localized for very long time and usually can be treated by surgery.

The group on the other side of the screen is called high grade malignancy, and unfortunately most lung tumor belong to the group. These are tumors that tend to spread beyond the lung to the lymph glands, brain, liver and other tissues, and therefore lead to death of a patient because tumor cannot be controlled.

Then there is an intermediate group called intermediate, but the behavior is somewhat between the low grade and the high grade. Now, we can concentrate on the high grade malignancy tumors. Again, because of the clinical behavior, they can be divided into two major groups, small cell and non-small cell.

The non-small cell are tumors that present, they may present in a localized fashion, and can be treated surgically. However, when they spread beyond the lung then they cannot be treated surgically and there is not at the present time a very effective modality of treatment.

The small cell carcinoma in contrast represent a group of tumors that when they are discovered, they are already growing beyond the lung, they have spread already to the lymph glands or other tissues. Therefore, it cannot be treated surgically; on the other hand, some of them respond at least for a certain period of time to radiation therapy and chemotherapy.

Now, again, these tumors, non-small cell and small

cell, have different appearance when seen under the microscope and therefore would be subdivided further into different types. If we look at the non-small cell carcinoma, we recognize about four main times.

The first type is called adenocarcinoma, these are tumors that tend to form glands, the word "adeno" meaning gland formation; the second type is called bronchoalveolar carcinoma, because again of the appearance of the tumor cells; the third one is called squamous, squamous cell carcinoma, because the tumor cell tend to simulate the same structure as we have in the skin, the squamous appearance. And then the fourth type, the cell are very bizarre, very varying size and shape, and they're called large cells.

If we go then the small cell group, again they're divided, subdivided in three types, based on the microscopic appearance, how they look under the microscope. One type is called oat cell because the cell tends to be elongated and pathologists like comparing the cell to other thing and they call oat, because they tend to be elongated like oat seeds.

One type is called intermediate and, finally, the third type is a combined, combined because it contains cells that look like other adenocarcinoma cell or squamous cell carcinoma.

BY MR. JOHNSON:

Q Doctor, are any of the cancers that you have put up

there in the high grade malignancy group caused by cigarette smoking?

A Well, it is believed that all of them in the high grade and possibly in the intermediate grade are caused by cigarette smoking. Now, the risk associated is different and not all of them have this same association of causation with the cigarette smoking.

Q Which two have the highest causation or association?

A The tumors with the higher causation with cigarette smoking are the small cell carcinomas and the squamous cell carcinoma.

Q Now, Doctor, to distinguish between one or another of those cancers, what as a pathologist do you do?

A Well, what we as a pathologist do is to cut very thin sections of the tumor tissue and prepare with certain dyes and certain stain to bring up characteristic appearance of staining of the tissue and then examine under a microscope.

Q Well, Doctor, before you stain the tissue after you have cut the section out, what does it look like; what color is it?

A Well, most of the cancer looks sort of a whitish but when they are cut, they're transparent.

Q Is that why you stain them?

A That's right.

Q Now, have you brought with you slides that you have in

your office that demonstrate the different forms of lung cancer and what they look like under the microscope?

A Yes, I brought examples from the high grade malignancy tumors, just to illustrate the different types. The slides are from my tissue collection as well as from the World Health Organization collection of classificational line tumors.

Q And what is the World Health Organization?

A The World Health Organization is an international organization involved with health problems and one of the tasks of the World Health Organization is to arrive to a uniform classification of tumors, including lung tumors, for the purpose of collecting data from different part of the world and to have a uniform way of classifying tumors.

Q Doctor, we can turn off the overhead and move to the slides for a second. Doctor, would you go through the slides and I think Mr. Childs will run them for you, and describe what each of the slides demonstrate, illustrates?

MR. JOHNSON: Your Honor, if we're only going to be using the slides for a minute or two, I am not sure that they'll show up as well if the lights are on. May the lights be dimmed?

THE COURT: Yes. Why don't you throw it on and then we'll just reduce the lights till we're sure they can be seen.

BY MR. JOHNSON:

Q Now, Doctor, in terms of what the jury is looking at, is the color significant on these slides?

A The color is significant only in the sense that what looks sort of dark purplish represent the nuclei, the center of the cell, and the pink, the pink shade represent the cell body. And these are important for us pathologists in order to classify different type of tumors. We look at the size of the cell, the size, the shape of the nuclei, as well as the arrangement of the cells.

Q And what kind of lung cancer is that, Doctor?

A This is a view of an adenocarcinoma of the lung.

Q Could we take the next slide? What is this?

A This is a view of the bronchoalveolar carcinoma and this structure which you see here is of the tumor cells.

Q Next slide, please. What is this?

A This is a view of a squamous cell carcinoma with the diagnostic features for the pathology which is the presence of this pink material.

Q What is that pink material?

A This is a carotid, it is a tissue which is similar to what you see on the surface of the skin.

Q Next slide, please?

A This is a large cell carcinoma, it's called large cell because the cells are quite irregular in the varying size,

some are very large, some are smaller, but they don't tend to resemble any tissue that one knows.

Q Next slide, please?

A This is a small cell carcinoma, again it's called small cell because the only thing that one recognizes under the microscope is the presence of these dark dots, which are the nuclei, and the cell has very little tissue around the nucleus.

Q Now, the -- could we turn off -- well, let's leave that on a second. Doctor, do you have a slide -- did you bring a slide with you from John Gunsalus' lung?

A I took -- I brought with me a slide taken from the autopsy material of Mr. Gunsalus.

Q Could we put that on? Doctor, describe what you see in Mr. Gunsalus' slide?

A Well, what one sees on Mr. Gunsalus' slide is again the presence of these very dark dots, which are the nuclei of the cells, and the cell have not any evidence of subordial cell cytoplasm around, and I think you can appreciate are very similar to the slide from the small cell carcinoma.

Q Now, Doctor, the slide on the right which is the slide from your office, where is that from?

A This is from the classification of lung tumor from the World Health Organization.

Q Doctor, may we just go back through the other slides up

against Mr. Gunsalus' slide and identify them once more?
A As you can compare, this is a large cell carcinoma, again characterized by very large bizarre nuclei and around the nucleus one can recognize the presence of the suborder of the cell cytoplasm. This is a squamous cell carcinoma, this is a bronchoalveolar carcinoma, and this is an adenocarcinoma.
Q And could we then put the small cell carcinoma from the World Health Organization on the screen just once more? Doctor, you mentioned -- I asked you a few minutes ago about cigarette smoking and small cell carcinoma. During your-- in your work as a pathologist, approximately how many slides of small cell carcinoma have you looked at in your career?
A Well, it's difficult to give a precise number, but it must be at least more than a thousand.
Q Doctor, in how many of the cases where you have observed small cell carcinoma has there been a history of cigarette smoking?
A Well, in my experience, in my cases, all of the patients had history of cigarette smoking.
Q Would the opposite of that, I take it, Doctor, would be that you have never seen a case of small cell carcinoma without a history of cigarette smoking?
A In my experience I have never seen it.
Q Now, Doctor, are you familiar -- would it be appropriate

to call Mr. Gunsalus' cancer on the left a neuroendocrine tumor?

A Well, the -- I have again, it's short, it may explain the terminology. The neuroendocrine tumor is confusing terminology and I'd perhaps like to before I answer your question explain what a neuroendocrine tumor is.

Q Could we turn off the slides and put on the overhead that the doctor referred to.

Doctor, is that a chart that you prepared?

A I prepared this chart to explain on neuroendocrine tumor, which is a relative new concept and it has probably been misused in the light press. The certain lung cancers produce chemical hormones and I believe to be arising from a common cell type, and therefore, they receive the denomination of neuroendocrine in the sense that it were believed to be arrived from a cell similar to a nerve cell that produces certain chemical substances, and really they can be divided into groups of low-grade malignancy into medium grade and high grade. And as most carcinomas are part of a large group of tumor which fall into a large group of neuroendocrine tumors.

A small cell carcinoma in a great majority of cases are part of the neuroendocrine tumor classification. In terms of epidemiology and trigger behavior, they are completely separate from other groups which are the atypical carcinoma.

Q Doctor, what did you mean that in terms of the epidemiology the small cell carcinoma was different?
A The neuroendocrine carcinoma, small cell carcinoma, the lung is a variety of a neuroendocrine tumor but is what has been described in the past as being small cell carcinoma.

All the data we have on the biology of small cell carcinoma is based on the old terminology. Moreover, the classification of small cell as neuroendocrine carcinoma is not accepted yet in the general by the pathologies and by the World Health Organization.
Q Doctor, if we were for whatever reason to put the name neuroendocrine tumor on what you observed on John Gunsalus' slide, would that change what caused it?
A Absolutely not.

Let me add the one thing --

THE COURT: I'm sorry. You just answer the question because opposing counsel has the right to object to the question.
BY MR. JOHNSON:
Q Do you wish to explain your answer further, Doctor?
A I would like to explain that to classify a tumor as a neuroendocrine one would need to do additional studies that could not be done in Mr. Gunsalus' tissue.
Q Now, Doctor, do you -- by looking at Mr. Gunsalus' tumor are you able to state, by looking at the tumor or by looking

at x-rays when the tumor started to a reasonable degree of medical certainty?

A I'm not able to do that.

Q Is anyone able to do that?

A I don't think anybody is able to do that.

Q Why is that?

A Because the rate of growth of a tumor is not constant. What we know is and what has been trying to be measured is the rate of growth of tumor when they become visible, clinically by x-rays, it's called doubling time. What is not known is the degree of progression of the tumor before it becomes clinically manifest. From the time one single cell is transformed into tumor cell to the time the tumor becomes a visible mass, and this we don't know and nobody knows how fast a cell will grow.

Q Doctor, I would like you to assume that John Gunsalus smoked from 1941 to 1987 between one and two packs of cigarettes per day and that the lung cancer that you have looked at on the -- in the slides from the autopsy presented in 1985, based on your education, training and experience in the scientific evidence of your profession and the materials you've reviewed in this case, do you have an opinion to a reasonable degree of medical certainty as to whether his smoking during his lifetime was a substantial contributing factor to the development of the lung cancer that you

observed on the microscope?
A I believe so. I think it was a substantial factor in developing his cancer.
Q Now, Doctor, assume that from 1941 to 1966, he smoked between one and two packs of cigarettes per day and the lung cancer presented in 1985, based on your education, training and experience and the scientific evidence in your profession and the materials you've reviewed in this case, do you have an opinion to a reasonable degree medical certainly as to whether his cigarette smoking prior to 1966 was a substantial contributing factor to the development of his lung cancer which presented in 1985?
A Yes, I do. I believe that changes were induced in his cells by the smoking prior to 1966.
Q And that would be a substantial contributing factor to the development of his cancer?
MR. MANNINO: Your Honor, objection, leading.
THE COURT: Sustained. Do you need the Doctor here any more, are there more slides or overheads?
MR. JOHNSON: Not at this point, your Honor.
THE COURT: Will you resume the witness stand.
BY MR. JOHNSON:
Q Doctor, would you please explain the answer that you jut gave?
MR. MANNINO: Objection, your Honor, I believe he's

given his opinion and he's leading him again.

THE COURT: No, he's asking him to explain his opinion to the extent that he hasn't already testified, but the prior question has been stricken. So, he's back to the question before that.

MR. JOHNSON: That's right. Thank you, your Honor.

THE WITNESS: Will you repeat --

THE COURT: Is smoking prior to 19 -- from 1941 to 1966. You said you believed changes in his cells prior to 1966.

THE WITNESS: Yes, I do.

THE COURT: Now, the lawyer for Mr. Gunsalus is asking you to explain that answer.

THE WITNESS: The way tumor develop is probably in two stages. The first stage is changes in the nuclear material and genetic material of the cell, which is called initiation. Then a second phase is required for the tumor to become clinically manifest, which is called promotion. I believe that changes caused by smoking, carcinogen present in smoking alter the genetic material in cells, in the lung cells of Mr. Gunsalus, and therefore, I believe smoking prior to 1966 had a substantial importance in the development of his cancer.

MR. JOHNSON: Thank you. May I just have a moment? Cross-examine.

THE COURT: Mr. Mannino -- oh, Mr. Sheffler, excuse me. Would you like to turn off the slide please, unless you want it.

MR. SHEFFLER: I don't believe so, your Honor.

CROSS-EXAMINATION

BY MR. SHEFFLER:

Q Doctor, you submitted three separate letter reports to the plaintiff's counsel in this case, did you not?

A I believe so.

Q And the first one was dated January 25, 1988. The second one was dated February 26, 1988 --

THE COURT: Could you keep your voice up, I'm having a little trouble hearing you?

MR. SHEFFLER: I'm sorry, your Honor.

Q And the third report was dated March 29, 1988; is that right?

A That's correct.

Q Doctor, is it your opinion that the doubling time computed from the serial chest x-rays are limited because they only measure the clinical growth of the tumor?

A That's correct.

Q And that's after it's grown to one centimeter in size?

A At least a centimeter, sir.

Q And you're familiar though, Doctor, are you not, with the experimental studies on human lung cancer cells in vitro

that made the doubling time?
A I'm vaguely familiar, yes.
Q Doctor, so that I understand what we mean with doubling times, the medical community generally believes that a cancer begins with one neoplastic cell; is that correct?
A It is there, I believe so.
Q And as a cancer grows that cell divides; is that correct?
A That's correct.
Q One cell divides into two --
THE COURT: Ask the Doctor to define neoplastic, since I don't think that's come up before, and we have one neoplastic cell.
THE WITNESS: Neoplastic essentially means a new growth, so a cell which is abnormal to the tissue.
THE COURT: One malignant or one cancer cell, is that what you're talking about?
THE WITNESS: One cancer cell.
THE COURT: Some of us aren't as familiar with this as others.
MR. SHEFFLER: Sorry, your Honor.
Q Until that first neoplastic cell presents itself in a person, he does not have cancer; is that correct?
A That's correct.
Q And as that cell divides, the tumor doubles; is that

correct?

A The tumor cell doubles.

Q And as two cells double into four and four into eight and eight into sixteen, that's what we refer to as doubling time; is that right?

A That's what it's believed to be, yes.

Q There are experimental studies such as found to be labeling, autoradiographic studies that measure the growth of this doubling time; isn't there Doctor?

A In vitro.

Q And Doctor, would you tell the jury what in vitro means, please?

A In vitro means that the cells have taken away from the normal environment of the body and put in an artificial medium, an artificial condition and examined over a period of time.

Q And isn't it true, Doctor, that in vitro studies form the basis for many of the theories in carcinogenicity today?

A No, I don't agree with that.

Q Doctor, isn't it true that as tumors grow, as they double, as the grow larger, the growth rate slows down because of lack of nutrients, lack of oxygen, lack of space?

A Well, there are many factors. Nobody can extrapolate from a vitro to what happens in people because as you

mentioned a tumor may grow, may die, some may die, they may not receive enough of a blood supply. They are under a different environmental control than in vitro, yes.

Q So, in other words, Doctor, in vivo, which is in the body, the tumor cells would grow slower because of lack of blood as you said, they may die, et cetera; is that true, Doctor?

A No, that's not accurate at all. The may slow down, they may accelerate to the growth factor which are secreted by the body.

Q Doctor, did you know that Mr. Gunsalus had chest x-rays on October 27th and 28th of 1984?

A No, I did not know that.

Q You did not review the medical records in this case, Doctor?

A I did not.

Q Doctor, isn't it your normal practice when you get a case whether it be in a legal situation or a medical situation, isn't it your normal practice to review all of the medical information available?

A No, it's not the normal practice. As as a matter of fact we received tissue from physicians with summaries of what problem the patient has and we'd rely on the physician to provide the clinical information.

Q Doctor, did you review the records of the treating

physicians in this case?
A No, I did not.
Q Again, Doctor, isn't it your normal practice to try to review all of the treating pathologists reports when you have a case to review?
MR. JOHNSON: Objection, I don't think there exists such a thing as a treating pathologist.
THE COURT: I think that the medical expert can take care of that himself.
THE WITNESS: It will be desirable to have as much information as possible, yes.
BY MR. SHEFFLER:
Q And you didn't have that information in this case, is that true, Doctor?
A I thought I had enough information because I was provided with the autopsy reports and with a report from Dr. Paul Epstein.
Q Dr. Paul Epstein was not a treating physician of Mr. Gunsalus, was he?
A To my knowledge he was not.
Q Doctor, let me show you the reports of the October 27 and 28 x-rays -- these x-rays were taken in 1984.
MR. SHEFFLER: Your Honor, if I may?
THE COURT: Yes.
(Pause.)

MR. SHEFFLER: Your Honor, these reports were previously marked as Defendant's AT-1.

THE COURT: 81?

MR. SHEFFLER: AT-1.

THE COURT: AT --

MR. SHEFFLER: AT-1. I'd like to designate them as AT-1A since we're not putting in all the medical records at this time.

THE COURT: All right.

BY MR. SHEFFLER:

Q Doctor, do you see the impression recorded on the October 27, 1984 x-ray. I believe it's the second one there, Doctor. Now, what does it state?

A No significant abnormality.

Q Doctor, in October 28, 1984, Mr. Gunsalus had another chest x-ray?

A Yes.

Q And what does it state?

A It's difficult to read but they say no significant abnormality.

Q So, Doctor, in 1984 in October, Mr. Gunsalus had no significant abnormalities, no cancer mass indicated on the chest films; is that true?

A It appears true.

Q Now, Doctor, I'd like to also give you another record

from the medical directors at the VA.

MR. SHEFFLER: Again, your Honor, this is from Defendant's AT-1 and we'd like this to be designated as 1B.

THE COURT: Is it B, did you say?

MR. SHEFFLER: 1B.

THE COURT: Okay.

Q If you would, Doctor, look in the second page of that document. Do you see where it says CXR, about midway down, Doctor?

A In mid sort.

Q Doctor, what does CXR -- what is that abbreviation?

A I guess -- I suppose a chest x-rays.

Q Doctor, do you see following CXR in four centimeters, fluffy perihilar mass in interior lung?

A Yes.

Q Is that the cancer, Doctor?

A Most likely is the cancer.

Q Doctor, what's the date of that record?

A I'm trying to find it. 4-23-85.

Q So, Doctor, from October 1984 when the cancer was undetectable on x-ray until April of 1985, Mr. Gunsalus' cancer grew from something that was less than a centimeter in a size to at least four centimeters in size; is that true?

A It appears to be.

Q Now, Doctor, in your opinion is that consistent with the reported doubling times for small cell carcinoma?
A I think it's classic presentation of small cell carcinoma of the lung.
Q It has a very rapid doubling time, isn't it?
A Once it becomes manifest, yes.
Q And this is subclinically as well, isn't it, Doctor?
A No, there are no data.
Q Well, Doctor, in this patient as of 1984, October the tumor was subclinical, was it not?
A In '84, yes.
Q So, from the subclinical time in '84 until its presentation in April of '85 it grew very rapidly and very aggressively; is that true?
A That's correct.
Q Now, Doctor, I want to ask you a question that I believe was put to you in a little different form by Mr. Johnson. Can you with a reasonable degree of medical certainty state that John Gunsalus' cancer started growing before 1966?
A There's no way I can say that.
Q Can you state with a reasonable degree of medical certainty, Doctor, that the first neoplastic cell which began doubling was present in Mr. Gunsalus' lungs before 1966?
A It is possible but there's no way I can say.

Q But you cannot say?
A I cannot say.
Q Doctor, I guess that follows that you cannot say that that cell did not develop after 1966 --
MR. JOHNSON: Object, to the form of the question.
THE COURT: Well, you asked him two ways, Mr. Johnson. I think that on cross-examination, he can ask him two ways.
MR. JOHNSON: I don't object to him asking the question as long as he doesn't have double negatives. I think that --
THE COURT: Well, if the witness doesn't understand the question, I'm sure he knows how to communicate that. Your objection is overruled.
THE WITNESS: Would you mind to repeat --
BY MR. SHEFFLER:
Q Doctor, with a reasonable degree of medical certainty can you tell this jury that John Gunsalus' cancer, the first neoplastic cell, did not start after 1966?
A I cannot say that.
Q Doctor, you testified on direct about clinical changes in the cells, do you recall that, sir?
A Yes.
Q And it's your opinion that these clinical changes possibly could be there before 1966; is that correct?

A I believe they were, yes.
Q Now, these changes are reversible until they become that neoplastic cell, are they not, Doctor?
A No, the changes are not reversible but the tumor cell may die and fail to multiply as you mention to a clinical tumor.
Q Doctor, you're familiar with Dr. Oscar Auerbach?
A Sure.
Q Is he a pathologist, sir?
A He's an experimental pathologist. He used to be a Orange VA Hospital.
Q Doctor, you consider him an expert in the area of lung cancer?
A No, I think -- he has written in the area of lung cancer, yes.
Q In fact, Doctor, he has written in the area of lung cancer in a book called "Fishman's Pulmonary Disease and Disorders," isn't that true?
A That's correct.
Q And you've written in that book too, haven't you, Doctor?
A That's correct.
Q Doctor, I'd like to show you a section from that book and ask you a question about it.
MR. SHEFFLER: If I may, your Honor?

THE COURT: Yes.

MR. JOHNSON: Your Honor, may I be shown which of the documents that I've been handed as this since I have one page.

THE COURT: Certainly. Would you --

MR. SHEFFLER: Page 1399, Fishman's Pulmonary Disease.

THE COURT: No, the one I have is 1391.

MR. SHEFFLER: 91, excuse me.

THE COURT: It has a figure 126B, that's how you can identify it.

BY MR. SHEFFLER:

Q I'll have you direct your attention, Doctor, to the section marked, the effects of stopping smoking. Follow with me if you will, sir. After cessation of smoking, the number of cells with atypical nuclei decreases, progressively. Extent of reversal depending on the number of years after smoking was stopped. A unique cell with the disintegrating nucleus has been identified in the mucosa of the ex-smoker. The presence of this cell has been interpreted as evidence of a return to a more normal cell population.

Do you agree with that, Doctor?

A I agree with the statement that Dr. Auerbach did in his study, yes. It does not...

Q So the cells do return to a normal cell population --

MR. JOHNSON: Objection.

MR. SHEFFLER: -- upon quitting smoking, is that correct.

MR. JOHNSON: Objection. Counsel's attempting to quote back to the witness leaving out a portion of the quote.

THE COURT: You may ask questions -- having pointed out the quote, he can ask him a question that isn't in the quote, if you ask it as a question instead of as a comment of your own.

BY MR. SHEFFLER:

Q Doctor, in your opinion, do the cells that have been changed by cigarette smoking revert to normal cell populations upon cessation?

A No, absolutely not, because what you're talking about is the appearance of the cell and it's possible under the microscope the cell may appear normally but their genetic materials been alter. This not going to be seen by lab microscope, electromicroscopy.

Q It's not even seen by electromicroscopy?

A Absolutely not.

Q We don't have any other way of seeing this, do we, Doctor?

A Well, there are new way of doing that which is called

molecular biology where nucleic acid is measured and examined.

Q Doctor, I'd like to ask you a hypothetical question and I'd like you to give me an answer to this question with a reasonable degree of medical certainly, if you can, Doctor.

If John Gunsalus had stopped smoking in 1966 and stopped and had never smoked another cigarette, can you with a reasonable degree of medical certainty state that he would have developed cancer in 1985?

A I don't know how I can answer the question because Mr. Gunsalus did not stop smoking.

Q You can't answer that question, Doctor?

A I cannot answer.

Q You cannot answer the question?

A For that particular person I cannot answer that question.

Q Doctor, are you familiar with the textbook, Spencer's Pathology of the Lung?

A Yes, I am.1

Q Do you own a copy of that book, Doctor?

A I have. I have two copies.

Q Two copies?

A Yes.

Q Do you have the most recent copy, the 1985 edition?

A I have recent copy, I have at home and in my office.

Q That's a book you generally recognize and rely upon, I take it?
A It's an excellent book.
Q Doctor, I'd like to show you a section from Spencer's Pathology of the Lung. This is Page 927 of Spencer's.
MR. SHEFFLER: May I, your Honor?
THE COURT: Yes.
BY MR. SHEFFLER:
Q Doctor, on Page 927, would you -- excuse me. 853, I'm sorry, Doctor. Page 853, would you follow me, sir?
A Yes.
Q It is now confirmed that if a heavy cigarette smoker ceases the habit, the risk of developing the disease diminishes with every year since smoking stopped. After ten years the risk is a little more than in a non-smoker.
Do you agree with that, Doctor?
A I agree that there are studies showing that, yes.
Q Would you agree, Doctor, that the risk decreases upon cessation?
A Absolutely, after ten years or so.
Q And it continues to decline?
A It declines, yes.
Q And if a person stops for ten years, his risk is a little more than a non-smoker's risk --
A It's about 2.5 percent.

Q And it continues to decline over time, is that correct, Doctor?
A It says to be declined.
Q Doctor, you've shown us various slides of lung cancer. Do you recall that, Doctor?
A Yes.
Q And you showed us four slides, I believe, that were from the World Health Organization, Doctor?
A No. The last slide, the small slide were from the World Health Organization. The other slide were from my private collection.
Q Doctor, the classification of tumors is continually evolving, is it not?
A That's correct.
Q In fact, the WHO or the World Health Organization originally produced a classification of lung tumors in 1967, is that right?
A That's correct.
Q And it revised that again in 1981?
A Yes.
Q And there are other classifications for lung carcinomas, aren't there?
A Yes.
Q Are you familiar with the Armed Forces Institute of Pathology classification system, Doctor?

A Yes.
Q Is that the system that is generally used by most pathologists in the country today?
A Yes.
Q Doctor, you showed us a picture of neuroendocrine tumors, do you recall that?
A No, I did not show a picture of that, neuroendocrine tumor.
Q Oh, you didn't show us a picture of a well differentiated neuroendocrine tumor, is that true?
A I did not do that.
Q Doctor, on your chart where you described the different kinds of lung cancer, do you recall that?
A Yes. There are two shots. The first or the second?
Q Well, let's talk about the first one, Doctor, where you had small cell carcinoma, bronchoalveolar carcinoma, adenocarcinoma. You also had a designation of atypical carcinoid. Do you recall that, Doctor?
A Yes.
Q An atypical carcinoid has been referred to in various ways, has it not, Doctor?
A Yes.
Q In fact, some people call an atypical carcinoid a well differentiated neuroendocrine tumor, isn't that true?
A That's correct.

Q You didn't have a picture of a well differentiated neuroendocrine tumor to show the jury today, did you?

MR. JOHNSON: Objection. May we go to sidebar, your Honor.

THE COURT: Yes.

(Sidebar discussion as follows:)

MR. JOHNSON: The only pathologist retained by the defense described Mr. Gunsalus' tumor as a well differentiated neuroendocrine tumor which in his mind was equivalent to a small cell carcinoma.

MR. SHEFFLER: It's not true.

THE COURT: If counsel intends to take the position that this is an atypical carcinoid, I object because I have been put on absolutely no notice about that.

MR. SHEFFLER: Your Honor, the witness --

THE COURT: I don't think he's doing anything of the sort. I don't think that this is the appropriate time to anticipate the defense. If when they put on their defense you want to object because you haven't had notice, I'll hear you. Right now you anticipated their defense evidently by showing slides of nuclear cells and saying what they were. He's entitled therefore to cross-examine him to point out that he brought slides of four kinds of high grade malignancies and he didn't bring any slides of --

MR. JOHNSON: I don't --

THE COURT: I'm not sure what you can make of it at this point.

MR. JOHNSON: I don't object to that.

THE COURT: But you're objecting to -- the question that you objected to, you didn't bring any slides of neuroendocrine tumors and asking him if he thought it was more along the --

MR. JOHNSON: Fine.

THE COURT: He had three kinds of small cell, he had four kinds of non-small cell, he showed the oat, the small cell and he showed all his and he showed -- to show why it was small cell and not those. I don't recall he showed the difference between an oat, an intermediate or a combined. He didn't show the atypical carcinoid and he didn't show the other -- the adeno -- whatever you call them. He can show that he didn't show all of those. If the jury wants to believe it might have been one of those, that's an inference he can raise.

MR. JOHNSON: Fine. All right.

(End of sidebar discussion.)

THE COURT: The objection's overruled. The pending question, I believe, can be repeated.

BY MR. SHEFFLER:

Q Doctor, you did not have a picture to show the jury today to compare with Mr. Gunsalus' cancer of an atypical

carcinoid, is that true?

A I did not bring -- yes. I did not want to give a lecture on lung tumors.

Q And that, Doctor, an atypical carcinoid is also called a well differentiated neuroendocrine tumor, is that correct?

A That's correct.

Q Would you agree, Doctor, that there are certain characteristics that small cell carcinoma and atypical or well differentiated neuroendocrine tumor have in common?

A No, I don't agree with that.

Q You don't agree there's any morphological characteristics that can be found in both tumors, Doctor?

A Not until I microscope.

Q Doctor, are you familiar with the -- are you familiar, sir, with the Armed Forces Institute of Pathology?

A Oh, sure.

THE COURT: That was asked and answered.

BY MR. SHEFFLER:

Q And, Doctor, doesn't that fascicle talk about well differentiated or atypical carcinoids?

A I don't believe it talks of atypical carci -- neuroendocrine tumor in the fascicle but it describes atypical carcinoid, yes.

Q And doesn't it say, Doctor, that in an atypical carcinoid, rosettes and trifecular patterns can be seen?

A That's correct.

MR. JOHNSON: Objection. If counsel's going to put something -- if he's going to talk about what a book says, I think he should put it in front of the doctor.

THE COURT: He's not required to do that. Overruled.

BY MR. SHEFFLER:

Q And, Doctor, doesn't that same book also said that you can see rosette patterns and trifecular formations in small cell carcinoma?

A That's true.

Q So therefore, Doctor, there is at least two patterns that you can see in both an atypical carcinoid and a small cell carcinoma?

A If you take it as read context, yes.

Q Doctor, the slides that you have shown the jury today, that were prepared by you, one of those was from John Gunsalus' lung cancer, is that correct?

A Yes.

Q And three of them were other slides that you had prepared from other cancers, is that correct?

A I believe there are four.

Q Well, Doctor, I think you told us that one of the slides was from the World Health Organization?

A Oh, yeah. Well, that's from my collection, right.

Q So the other three slides were prepared by you?
A Yes.
Q Doctor, one of those slides was a squamous cell carcinoma.
A Yes.
Q What was the magnification of that?
A I think the magnification was about 450.
Q What was the magnification of the small cell carcinoma of Mr. Gunsalus?
A It was about 250.
Q So, Doctor, when you showed us the comparison between Mr. Gunsalus' lung cancer and the squamous cell of the bronchoalveolar and the other pictures that you had there, they were not all of the same magnification, were they?
A That's correct.
Q In fact, the small cell carcinoma for Mr. Gunsalus was a lower magnification, isn't that true?
A It was the same magnification as the World Health Organization.
Q But it was a lower magnification than the squamous cell carcinoma you showed, the bronchoalveolar carcinoma that you showed and the adenocarcinoma that you showed?
A Yes, because I wanted to use the slide from the World Health Organization and to compare the two, I had to use a set magnification on Gunsalus that the World Health

Organization I had.
Q If you used different magnifications, Doctor, that does not give you an accurate comparison, does it?
A You can say that.
Q But you use a different magnification to compare Mr. Gunsalus' slide that you prepared to the squamous cell, the adeno and the bronchoalveolar, is that true?
A Yes, I did.
Q Doctor, the size of Mr. Gunsalus' lung tumor was approximately six by four by four centimeters, is that right?
A By the time he die?
Q At autopsy.
A Yes.
Q Would you agree, Doctor, that the tissue block that you received was from that tumor that was seen at autopsy?
A Well, let me qualify that. I -- my original letter of February 26th, I received tissue from the autopsy. Subsequently when I was asked to testify I received the entire -- all the slides from Mr. Gunsalus including biopsy and I reviewed them.
Q Doctor, the slide that you used to photograph so the jury could see it today, was that made from Mr. Gunsalus tumor?
A Yes, it was from the autopsy.

Q Okay. Would you agree, Doctor, that that came from a tissue block from that tumor?
A Oh, yes.
Q And would you agree, Doctor, that the tissue block comprised less than five percent of the entire tumor?
A Well, the particular slide I'm sure was from a tissue block.
Q Doctor --
A I have reviewed several blocks which comprise more than what you --
Q I agree, Doctor, that you've reviewed several blocks. My question is, did the tissue block that you made the slide, that you made the picture, that you showed the jury, that tissue block was less than five percent of Mr. Gunsalus' tumor, was it not?
A Yes.
Q And, Doctor, the slide that you prepared, the microscopic slide, you took a sliver of that tissue block --
A Mm-hmm.
Q -- and you put it on a slide, is that right?
A Yes.
Q And that sliver of tissue, that was less than five percent of the tissue block, wasn't it?
A That's correct.
Q And, Doctor, when you took your picture to show the

jury, you took only one small portion of that entire slide, isn't that true?

A That's correct.

Q And that was even less than five percent of the entire portion of that slide, isn't that right?

A That's correct.

Q So, Doctor, would you agree that what you've shown the jury is less than one-hundredth of a percent of Mr. Gunsalus' tumor?

A It was -- yes. It was representative of the entire tumor.

Q Doctor, have you heard of the term, interobserver variability as it is applied in pathology?

A Yes.

Q And that happens when two or more pathologists look at the same slides of the tumor and come to different diagnoses, isn't that right?

A No. I think you should -- this should be qualified. I think that two pathologists, expert in the field, would not really reach a different conclusions -- they may reach a different conclusion as the subtype.

Q Doctor, is it true that well differentiated neuroendocrine tumor and small cell carcinoma are both subtypes of the family of neuroendocrine carcinoma?

A Yes.

Q Doctor, you submitted three different reports, you recall, to Mr. Johnson.

A Yes.

Q I'd like to turn now, Doctor, to the first report. Now, do you have a copy of that with you?

A No, I don't.

Q If I may --

MR. JOHNSON: Objection, your Honor. May we go to sidebar.

THE COURT: Yes.

(Sidebar discussion as follows:)

MR. JOHNSON: This first report concerns a digestion study he did on tissue for the presence of asbestos fiber. I did not inquire about that on direct, I did not ask him for an opinion about asbestos, I think accordingly it is beyond the scope and I request that my objection be sustained.

MR. SHEFFLER: Your Honor, may I be heard?

THE COURT: Yes. Let me see the report.

MR. SHEFFLER: Your Honor, this was an expert report. It was tendered to the defendants by the plaintiffs. Also, your Honor, Dr. Pietra has --

THE COURT: I didn't know -- of course an expert report is tendered by the plaintiffs that you can cross-examine beyond the scope of direct.

MR. SHEFFLER: Well, I would like to add, your Honor, that this report has been sent to other plaintiffs. Other plaintiffs have seen it and they've testified about it. Dr. Paul Epstein had testified about Dr. Pietra's digestion analysis.

MR. JOHNSON: Only on cross.

MR. SHEFFLER: In that, your Honor, he testified that Dr. Pietra's analysis was not credible and not reliable because it was of cancer of the lung. Dr. Pietra's report states that it is not of cancer of the lung. It was a cancer in one block with tissue, lung tissue in the other block.

THE COURT: Let me read the report and see what you're offering.

(Pause.)

(End of sidebar discussion.)

THE COURT: I'll excuse the jury. Oh, we'll take at least ten minutes, if you want to step out.

(Jury excused.)

(Sidebar discussion as follows:)

THE COURT: Mr. Sheffler, I'm sure I misunderstand you. As I understand it, you want to bring this up because then you want to show that Dr. Epstein said he didn't know what he was talking about.

MR. SHEFFLER: Dr. Epstein misrepresented what --

THE COURT: Did Dr. Epstein testify about this report in his testimony?

MR. SHEFFLER: Yes, he did.

THE COURT: What was it that he said? I don't remember.

MR. SHEFFLER: He said --

THE COURT: Did he say he relied on it?

MR. JOHNSON: No.

MR. SHEFFLER: He discounted it.

THE COURT: In his testimony here?

MR. SHEFFLER: And the reason he discounted it, you Honor, was he said that --

THE COURT: Oh, you asked him something about whether asbestos would change his opinion or something?

MR. SHEFFLER: He asked Dr. Epstein --

THE COURT: Let me have the transcript, please.

All right.

MR. SHEFFLER: Dr. Epstein testified that he -- if I may, your Honor.

THE COURT: That's why we don't usually have things plugged in here.

MR. SHEFFLER: If I may, your Honor, may I just put this in the proper context?

THE COURT: Yes, you may.

MR. SHEFFLER: There were three reports given by

Dr. Pietra. The first report dealt --

THE COURT: I gathered that. I heard that.

MR. SHEFFLER: After Dr. Pietra had given us this report --

THE COURT: Yes.

MR. SHEFFLER: -- we received another report from Structure Probe. The Structure Probe report, your Honor, has been sent to all their expert witnesses --

THE COURT: I understand that.

MR. SHEFFLER: -- and we intend to hear Structure Probe report referred to frequently.

THE COURT: Yes.

MR. SHEFFLER: Both of them were lung digestion analysis.

THE COURT: All right.

MR. SHEFFLER: Dr. Pietra did a lung digestion analysis which is a destructive test performed on lung tissue.

THE COURT: Yes.

MR. SHEFFLER: For the presence of asbestos fibers. We believe that we have the right to examine the person who did the test when we establish that his results are different than the Structure Probe results.

THE COURT: Well --

MR. SHEFFLER: We would like to be able to do that,

your Honor, with the witness because Dr. Paul Epstein discounted the report by saying, of course you won't find asbestos, it's all cancer and it's not.

THE COURT: If you think that his findings support your case, offer him as of cross on your case or something. I won't --

MR. SHEFFLER: Can we call Dr. Pietra for the purpose of explaining his report on our cross?

THE COURT: Well, would you object to that?

MR. JOHNSON: As an expert witness?

THE COURT: Well, he wouldn't be an expert, he'd be a fact witness. Isn't this a fact what he did and what he found? You couldn't call him as an expert. But it seems to me that on what he did and what he found it would be a fact witness, wouldn't it? I mean, if one of your -- as I understand one of your experts did experiments that vary from other experiments -- who's going to offer Structure Probe analysis?

MR. JOHNSON: It's already been used as a basis for Dr. Epstein's testimony.

MR. SHEFFLER: It's a basis for all --

THE COURT: But I mean something on that you rely?

MR. JOHNSON: That's right.

THE COURT: All right. So --

MR. JOHNSON: Because it was a destructive test

pursuant to the Federal Rules we advised them of Dr. Pietra's findings.

THE COURT: Yes, I understand that. And they want those findings on the record because as I understand it they contradict Structure Probe, is that correct?

MR. SHEFFLER: That's right.

THE COURT: Okay. Now, Dr. Epstein said, this is wrong and Structure Probe is right, is that it?

MR. SHEFFLER: That's right.

THE COURT: Okay. Well, now, why -- I agree with you it goes beyond the scope of the direct --

MR. JOHNSON: Mm-hmm.

THE COURT: -- but why shouldn't they be able to have on the record that these findings, in other words, it's in a sense an admission, I mean, he isn't your agent or something.

MR. JOHNSON: Mm-hmm.

THE COURT: And I mean this is a finding of the fact and in the interest of the administration of justice that this was found -- but I don't think that it's appropriate to do it. He didn't rely on the asbestos, he's not talking about the asbestos.

MR. JOHNSON: Well --

MR. SHEFFLER: May I raise one other issue?

THE COURT: Yeah. Did you cross-examine Dr. Pietra

-- Dr. Epstein about this?

MR. SHEFFLER: We did. And here's the cross-examination. It's right --

MR. MANNINO: I did that.

THE COURT: Well, then, it is on the record.

MR. SHEFFLER: Well, it seems that the responsiveness -- Epstein is misleading. That's what I'd like to clear up.

MR. MANNINO: That's wrong.

THE COURT: Right.

(Pause.)

THE COURT: These have pieces of the tumor, not pieces of the lung tissue.

MR. SHEFFLER: There was pieces of the lung tissue in --

THE COURT: Well, Mr. Johnson, you didn't answer me about getting -- it is true that Dr. Epstein denied -- I mean, that he said something about this that doesn't seem consistent but maybe what we have is the rule that you cross-examine a person and then you can't introduce into point of evidence to prove they're wrong about matters --

MR. JOHNSON: I think that's all we have here.

THE COURT: -- in evidence --

MR. SHEFFLER: Your Honor, if I may. The dilemma that we're placed in is this, we have two studies done and

they're the same types of studies, one by Dr. Pietra and one by Structure Probe. They didn't like the results Dr. Pietra, now they intend to squelch it and keep it from the jury and --

THE COURT: I don't think that's fair to characterize what they're doing that way.

MR. JOHNSON: If I wanted to squelch it, you wouldn't have gotten a copy of that report but because I'm an officer of the Court, you did.

MR. SHEFFLER: And you gave us a copy of the report so that we could use it.

THE COURT: Well, you did use it. You used it to cross-examine Dr. Epstein. The trouble is that you didn't seem to remember what it said.

MR. SHEFFLER: That's what's going to happen with all of these witnesses we can cross-examine unless we can establish a foundation that it was done by Dr. Pietra in a reasonable and calculated way.

MR. JOHNSON: Where are we, your Honor?

MR. SHEFFLER: We want to explore the basis on how he did it and what he used.

THE COURT: Well --

MR. JOHNSON: Well, if they open that door, then there's plenty I'll do on recross -- redirect.

MR. SHEFFLER: That's fine.

THE COURT: Well, it doesn't seem to me an appropriate time and place to do it. I think that we should limit his testimony to the direct and if this has independent relevance for one reason or another, I think that you should point out how you're entitled to use it under the Rules of Evidence and give Mr. Johnson a chance to oppose if he wants. But I certainly would not ordinarily permit them to call someone else's expert but I'm not convinced that this is expert testimony unless you state that his analysis or his -- it's just a matter of opinion.

MR. JOHNSON: Well --

THE COURT: Is there something on which people's opinion could differ?

MR. JOHNSON: As to what they look --

MR. SHEFFLER: The opinion could differ as to the environmental contamination point, your Honor. Whether or not what Dr. Pietra follows environmental contamination or not is opinion testimony.

THE COURT: Now, just a minute. He said he analyzed tissue specimens. He said what he did and what he took and then he said the analysis showed that of two samples received, A contained 135 of dry weight, the other contained 204 asbestos of dry weight leaving out whether they're compatible with environmental and that's an opinion.

MR. JOHNSON: Well, I think that counsel here is

going to probably attempt to establish that it requires quite a bit of expertise not only to do the test but to look at what you see and say that it's asbestos and extrapolate how much it is. So I think that certainly requires expertise.

THE COURT: The thing is complicated by the fact that it's destructive testing. I mean, it's the same problem we presented about the autopsy when -- isn't this the case on which the autopsy was without their notification and we have a great deal of concern about that?

MR. JOHNSON: Yes. Or their request to be notified, to be advised.

THE COURT: Pardon?

MR. JOHNSON: They -- you may remember that what came up at that hearing was the fact that they knew for a year and a half that my client was dying and never made a request that they be present at any autopsy.

MR. SHEFFLER: There was no --

THE COURT: Well, there was a motion, wasn't there, for an autopsy? No, that's a different --

MR. JOHNSON: No.

THE COURT: That's a different case.

MR. SHEFFLER: Your Honor, without our knowledge, without our advising --

THE COURT: Well, you did know he was going to die.

I guess what you didn't know is whether they'd do an autopsy.

MR. SHEFFLER: We didn't know they were going to spirit the body away and do an autopsy.

MR. MANNINO: Excuse me, your Honor, in terms of that on the record.

THE COURT: Yes.

MR. MANNINO: Suggestion of death was ever filed until we filed a motion to dismiss the case. And the autopsy was formed, I think within a day or two of the death.

THE COURT: All right.

MR. JOHNSON: You normally perform autopsies within a day or two of death.

THE COURT: It's a different -- in another case I have expressed my views about doing autopsies in asbestos cases without notifying opposing counsel; I find it improper. In that case there was a motion filed, but the answer wasn't due and they chose to ignore it.

I believe this is a difficult issue and I would like to do some research based on argument on the laws of evidence about this so that I'll preclude you from asking about it at this time and I'll reserve ruling and I'll keep Dr. Pietra available.

MR. MANNINO: Your Honor, may we have until Monday

to submit a brief on this issue?

THE COURT: Dr. Pietra is local and could be recalled?

MR. MANNINO: Yes.

MR. JOHNSON: I know he is local. I don't know whether he has any plans for the next week or two.

MR. MANNINO: Can we ask him?

THE COURT: Well, I'll find out.

Dr. Pietra, do you have any plans to go to scientific conferences or take a vacation in the next week or so?

THE WITNESS: No.

THE COURT: Do you have any plans to testify outside of the city that would take you out of town?

THE WITNESS: Not that I know of.

THE COURT: All right, thank you. We may wish to recall you, but I'm going to limit. You could be excused to take a break for a minute, and you also. I will reserve ruling on this and preclude you for the time being.

MR. MANNINO: And we'll submit a brief by Monday, your Honor.

THE COURT: Very well. And you can either wait for theirs or you can submit something, but I consider this very difficult. I want to be fair to both sides. You're absolutely right, it didn't come up in the direct; it may be

that there are substantial interests of justice involved and I would like to consider it and do what is fair to both sides.

All right, now take a break.

(End of sidebar discussion.)

(Recess taken.)

THE COURT: You may be seated.

(Sidebar discussion held on the record as follows:)

MR. JOHNSON: Your Honor, we had a discussion yesterday about Dr. Pietra's life in Europe before he came to America.

THE COURT: It was Dr. Ginzel.

MR. JOHNSON: Ginzel, you're right.

THE COURT: Yes.

MR. JOHNSON: I made statements about my understanding of what happened during the Second World War. Basically, I was accurate but there is a lot more to it than what I said.

THE COURT: It may be that we will impound this, depending on what it is.

MR. JOHNSON: Well, I'd like to have a discussion with the Court and counsel off the record.

THE COURT: Yes.

MR. JOHNSON: Describe what this is. I frankly think that his privacy deserves to be respected.

THE COURT: I understand that, but I guess that you want to hash it out before we go into his background.

MR. JOHNSON: Well, that's the reason I mentioned it.

THE COURT: All right.

MR. JOHNSON: What happened was last night I sat down with the doctor and went over it blow by blow.

THE COURT: What I would like to do though is excuse Dr. Pietra. I'm sure he has other things to do.

You will bring the jury back, we'll finish Dr. Pietra and I was just hoping to go -- I guess I'll just excuse them for an early lunch and we'll go right up to lunch.

MR. MANNINO: Your Honor, we could do qualifications, if you want.

THE COURT: Well, he's afraid -- he's not sure he is --

MR. MANNINO: I don't think it should mean a lot, but I don't want to be put in a position of not asking questions that I should ask.

THE COURT: All right, let's just get Dr. Pietra excused.

(End of sidebar discussion.)

THE COURT: Dr. Pietra, will you come back to the stand and bring the jury? These discussions are very

interesting to counsel and the Court, but I'm sure you have some other things you'd like to be doing.

(Jury in at 11:20 a.m.)

THE COURT: Please be seated.

Does that conclude your cross-examination?

MR. SHEFFLER: At this time, your Honor, it does.

THE COURT: Very well.

REDIRECT EXAMINATION

BY MR. JOHNSON:

Q Dr. Pietra, do you believe that it's proper to extrapolate from in vitro studies to in vivo information, that is to say from experimental studies to human information in terms of doubling time of tumors?

A No, because what we can get from an in vitro study are some basic information but in vivo tumor are under a variety of influences that cannot be duplicated in vitro. So one cannot extrapolate from in vitro to in vivo studies.

Q What do you mean a variety of influences?

THE COURT: Influences or information?

THE WITNESS: Influences.

They are growth factors, they are factors related to blood supply, to oxygen delivery, and a variety of conditions which has to do with the particular individual that are impossible to duplicate either in vitro or even in experimental animals.

BY MR. JOHNSON:

Q Doctor, with respect to the slide of Mr. Gunsalus which you've talked about, do you in the ordinary practice of your profession normally look, normally have every single piece of the tumor cut up into slides?

MR. SHEFFLER: Objection, your Honor, to form.

THE COURT: Overruled.

THE WITNESS: it is usual practice in pathology to take samples of a tumor which are tiny pieces of a tumor and examine under microscope, and it would be impossible to cut the entire tumor, especially a tumor of about 6 centimeter in size.

BY MR. JOHNSON:

Q How many slides would that make?

A Oh, that would be a hundred thousand slide which would be impossible to review. That would be useless because what one does is to take sample from different slide and examine how the tumor looks under the microscope and if all the slide look the same, one has the idea that one has taken a representative sample of the tumor.

Q And have you reviewed all of the slides in this case?

A I have reviewed all of the slides in this case prior to this meeting.

Q Doctor, could you put up the slide of Mr. Gunsalus?

THE COURT: Just a minute. Would you ask your

question so I see if it's necessary to show the slides again?

MR. JOHNSON: Sure.

BY MR. JOHNSON:

Q Doctor, with respect to the slide of Mr. Gunsalus, would an atypical carcinoid look like the slide of Mr. Gunsalus?

MR. SHEFFLER: Objection, your Honor; leading.

THE COURT: Sustained.

BY MR. JOHNSON:

Q Are there any -- what differences, if any, are there between an atypical carcinoid and the sort of carcinoid -- the sort of cancer that appears in Mr. Gunsalus' slide?

A A typical carcin -- there are two differences, one are the clinical differences and then there are pathologic differences. The clinical differences are due to the fact that well differentiated neuroendocrine carcinoma or a typical carcinoid are localized tumors. They usually arise away in the lung periphery as nodules that can be recognized that grow slowly and they may metastasize, may spread beyond the lung, but it takes a long time. So there are clinical differences, small cell carcinoma spread very rapidly, grow very quickly as they did in this case, and spread beyond the lung very rapidly. Microscopically the well differentiated or atypical carcinoid is a more compact, cohesive appearance than what we see in the slide of Mr. Gunsalus. So they are

microscopic clinical differences.
Q Do you believe that the cell you saw --
MR. JOHNSON: Oh, I'm sorry, may we turn it on, your Honor?
THE COURT: Well, what I am asking you to do is ask a question in which it's necessary to show them that is appropriate on redirect. So far, the witness hasn't shown any need for any slide and I haven't heard any question that requires it.
MR. JOHNSON: Fine.
THE COURT: So when that time comes you may turn it on.
MR. JOHNSON: Thank you.
BY MR. JOHNSON:
Q Doctor, is there any reason to believe that this slide, which I would like to show, is an atypical carcinoid?
A Absolutely not.
THE COURT: All right. Now, do you need the slide to show why not?
THE WITNESS: I don't think I could be -- if it's really necessary because --
THE COURT: Then we can turn it off?
MR. JOHNSON: Fine.
THE COURT: I'm attempting to let the witness testify.

MR. JOHNSON: Yes, your Honor.

BY MR. JOHNSON:

Q Doctor, with respect to the documented Page 853 from "Carcinoma in the Lung," do you still have that in front of you?

A No.

MR. JOHNSON: May I approach the witness with my copy, your Honor?

THE COURT: If you'd tell me which --

MR. JOHNSON: I don't have anything. I have one page, your Honor.

MR. MANNINO: Your Honor, we have the original book that it came from.

THE COURT: I have Page 927 and 1391, but I don't seem to have 853.

MR. MANNINO: Your Honor, I can put the original book before the witness.

THE COURT: Fine, thank you.

Is that the book which he has two copies?

MR. JOHNSON: He has two copies, your Honor.

THE COURT: All right, well, we've identified which book. Now, what is the question?

BY MR. JOHNSON:

Q Do you see the place where Mr. Sheffler had you read at the subnotation B on the left-hand column of 853?

A Yes.
Q Would you please read the sentence that Mr. Sheffler had you read and then read the immediately subsequent sentence?
A "It is now confirmed that if a heavy cigarette smoker ceases the habit the risk of developing the disease diminishes with every year since smoking stopped. After ten years the risk is little more than in a non-smoker. This runs contrary to the information gained from all experimental cancer research which has shown that once a threshold dose of a carcinogen has been applied, withdrawal of further application does not prevent the onset of the tumor."
Q Doctor, would you now turn to Page 1391 that was read to you under "The Effects of Stopping Smoking." Do you have that, Doctor? It's not that book, it's the other book that they were using, I believe. May we have that one, please?
MR. JOHNSON: I'll be happy to approach the witness, your Honor.
THE COURT: Well, he got it. Okay, what's the question?
BY MR. JOHNSON:
Q Doctor, Mr. Sheffler had you read a sentence from the left column in the center beginning "After cessation of smoking." Do you see where that was?
A Yes.

Q Would you read that sentence and finish the paragraph and -- just finish the paragraph?
A "After cessation of smoking, the number of cells with atypical nuclei decreases progressively, the extent of reversal depending on the number of years after smoking was stopped. A unique cell with a disintegrating nucleus has been identified in the mucosa of the ex-smoker, Figure 126-8. The presence of this cell has been interpreted as evidence of a return to a more normal cell population. These cells differ markedly from 'atypical' cells in which the nuclei resemble those of neoplastic cells."
Q Would you please go on to the next two sentences in that same passage.
A "Cells with disintegrating nuclei have been found five and more years after smoking has ceased (no further application of the carcinogen agent). Thus, the return to normal is gradual."
Q Thank you, Doctor.

MR. JOHNSON: No further questions on redirect.

THE COURT: Is there any recross?

MR. SHEFFLER: Just one.

RECROSS-EXAMINATION

BY MR. SHEFFLER:
Q Doctor, would you just finish the rest of the statement that Mr. Johnson asked you to read? What is the last

sentence, Doctor?

A "However, progression toward bronchial carcinoma is reversed soon after the carcinogenic agent is withdrawn. There is no doubt that cigarette smokers who stop smoking reduce their risk of acquiring lung cancer."

Q Thank you, Doctor.

THE COURT: I believe that you're excused.

(Witness excused.)

THE COURT: Members of the jury, we had not finished the matters we had to discuss outside your presence when I brought you back and I knew the testimony of Dr. Pietra on redirect would be brief and I didn't want to keep him waiting.

Therefore, I'm going to have to excuse you again. In an effort to expedite the matter, I think that what I will do is ask you if you would take your lunch and come back I guess quarter of 1:00. That means that you don't need to eat when you think it's still breakfast time and it will give us a chance to be able to proceed promptly.

I can't at this time tell you, as I had hoped to do at the luncheon recess, how late we'll be sitting today because that's one of the things that we are going to be discussing, but I will give you an afternoon break to make some calls and give you some idea.

Thank you, you're excused.

(Jury out at 11:30 a.m.)

THE COURT: I'll see counsel in chambers.

(Luncheon recess taken at 11:30 a.m.)